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Editorial

Vision Research reviews 'vision research'

This special issue of "*Vision Research* reviews 'vision research'" features 5 invited mini-reviews, all by highly regarded vision researchers, covering a wide range of topics in contemporary 'vision research'. In keeping with the breadth of coverage of the journal, the topics are highly diverse: from "animal models with outer retina phenotypes" to "vision in Autism Spectrum Disorder".

The Special Issue begins with a review of the history, phenotypes and gene defects of select animal models with outer retina (photoreceptor and retinal pigment epithelium) degeneration phenotypes (Baehr & Frederick, 2009). These animal models serve as powerful tools with which to investigate the etiology of human retinal degenerations, especially retinitis pigmentosa (RP), Leber congenital amaurosis (LCA), cone dystrophies (CD) and macular degeneration (MD).

The mainstream of research in binocular vision has long been focused on understanding how binocular disparity is used for depth perception. Two reviews deal with the topic of depth perception. In one article, Wilcox and Allison (2009) review literature on the full range of disparity processing to determine how well different proposed dichotomies map onto one another, and to identify unresolved issues. In a second article, Harris and Wilcox (2009) review the literature on how monocular regions in binocularly viewed scenes contribute to our perception of the three-dimensional world, with a focus on understanding the extent to which the role of monocular regions in depth perception can be understood using extant theories of binocular vision.

Eskew (2009) reviews a large number of studies, using a wide variety of experimental techniques, that have investigated the "higher-order" color mechanisms proposed by Krauskopf and colleagues in 1986, and concludes that no consensus on the existence or nature of higher-order mechanisms has been reached even after more than 20 years of study.

Finally, Simmons (2009) reviews the growing body of evidence that unusual sensory processing is at least a concomitant and possibly the cause of many of the behavioral signs and symptoms of Autism Spectrum Disorder (ASD).

We invited the authors to submit reviews that were broad and balanced in both the topics they address and the articles they cite; that not only summarize the field, but also help to explain it to the non-specialist in that area. We think that these authors have done just that and we hope that you find their reviews interesting and informative.

We hope you enjoy this special issue of "*Vision Research* reviews 'vision research'", and look forward to hearing from you.

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